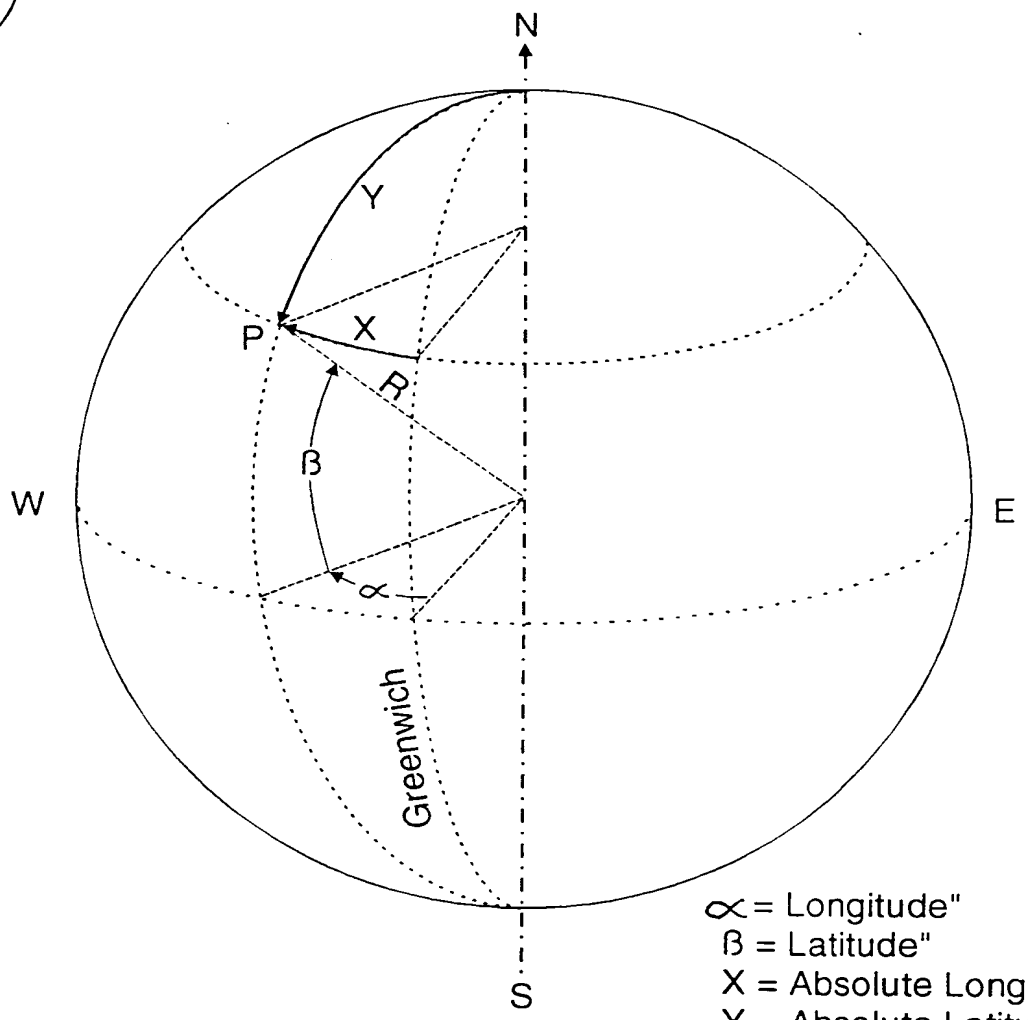
Absolute Geographic Coordinates (AGCs)



∝ = Longitude"
β = Latitude"
X = Absolute Longitude (m)
Y = Absolute Latitude (m)

Absolute Geographic Coordinates (AGCs):

A) <u>For a Point Situated at (∝ "W, β"N):</u>
X = ∝ x (2.500/81) x cos (β x 90/324.000) m
Y = 10.000.000 - β x (2.500/81) m

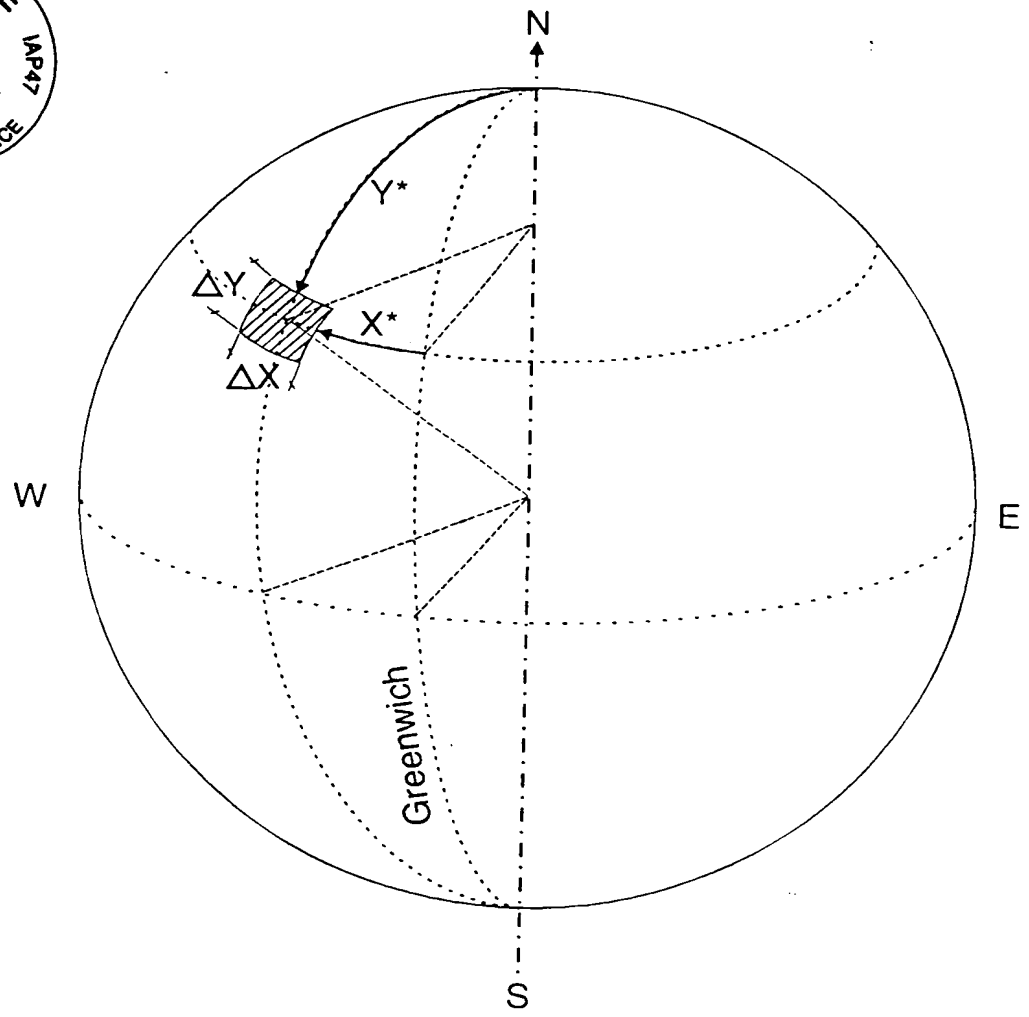
B) <u>For a Point Situated at (∝ "E, β"N):</u>
X = 1.296.000 - ∝) x (2.500/81) x cos (β x 90/324.000) m
Y = 10.000.000 - β x (2.500/81) m

C) <u>For a Point Situated at (∝ "W, β"S):</u>
X = ∝ x (2.500/81) x cos (β x 90/324.000) m
Y = 10.000.000 - β x (2.500/81) m

D) <u>For a Point Situated at (∝ "E, β"S):</u>
X = 1.296.000 - ∝) x (2.500/81) x cos (β x 90/324.000) m
Y = 10.000.000 - β x (2.500/81) m

FIG.1

Fuzzy AGCs Determine Geodesic Squares



Given a Point of the Earth with AGCs:

$X = x_7x_6x_5x_4x_3x_2x_1x_0$

$Y = y_7y_6y_5y_4y_3y_2y_1y_0$

Then, the "FUZZY" AGCs:

$X^* = x_7x_6x_5x_4x_3^*$

$Y^* = y_7y_6y_5y_4y_3^*$

Specify the Geodesic Square that contains all AGC1 (X,Y), such that:

$x_7x_6x_5x_4x_3000 \leqslant X \leqslant x_7x_6x_5x_4x_3999$; $\triangle X = 1000m$

$y_7y_6y_5y_4y_3000 \leqslant Y \leqslant y_7y_6y_5y_4y_3999$; $\triangle Y = 1000m$

FIG. 2

Conventional Digital Map

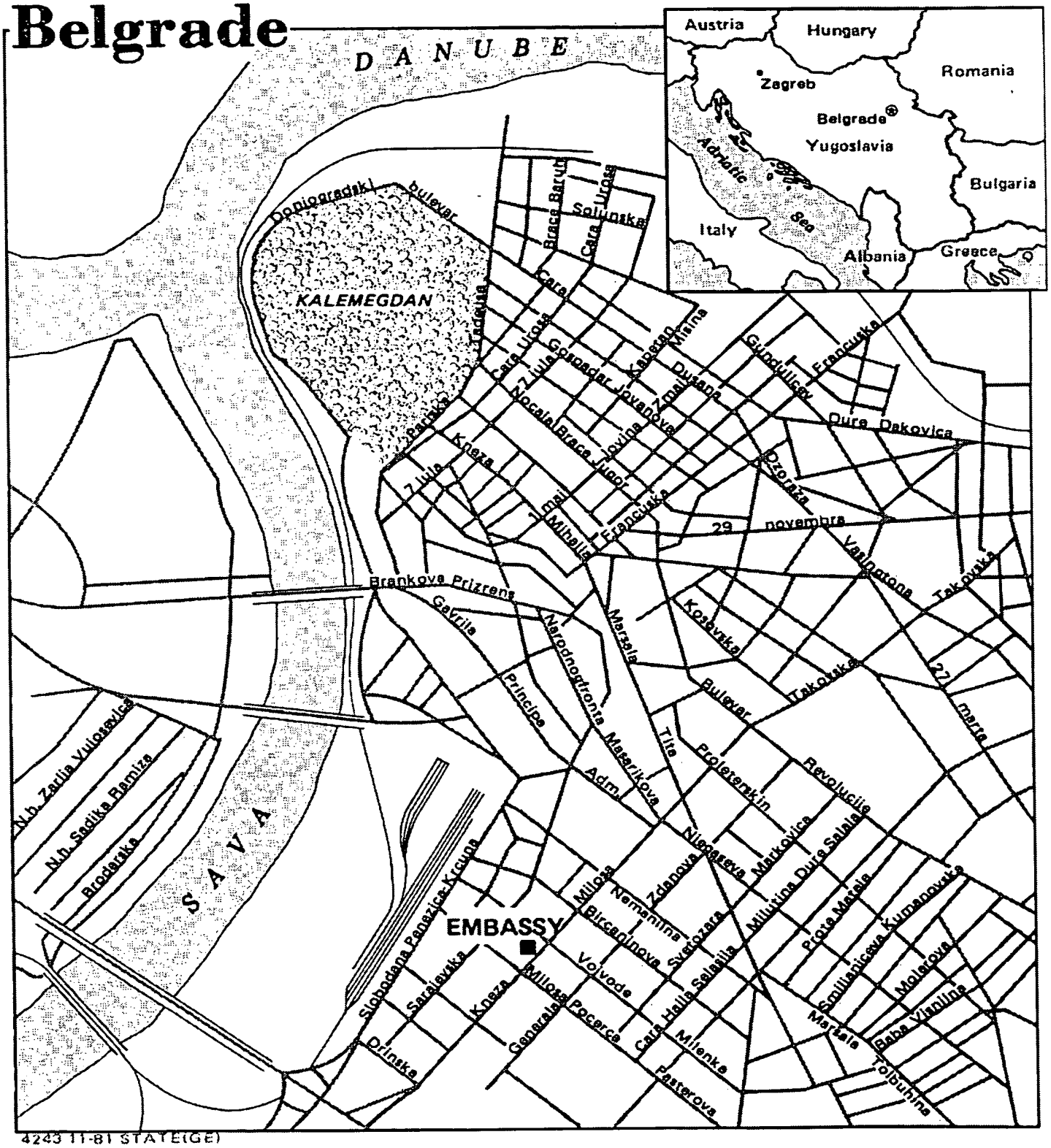
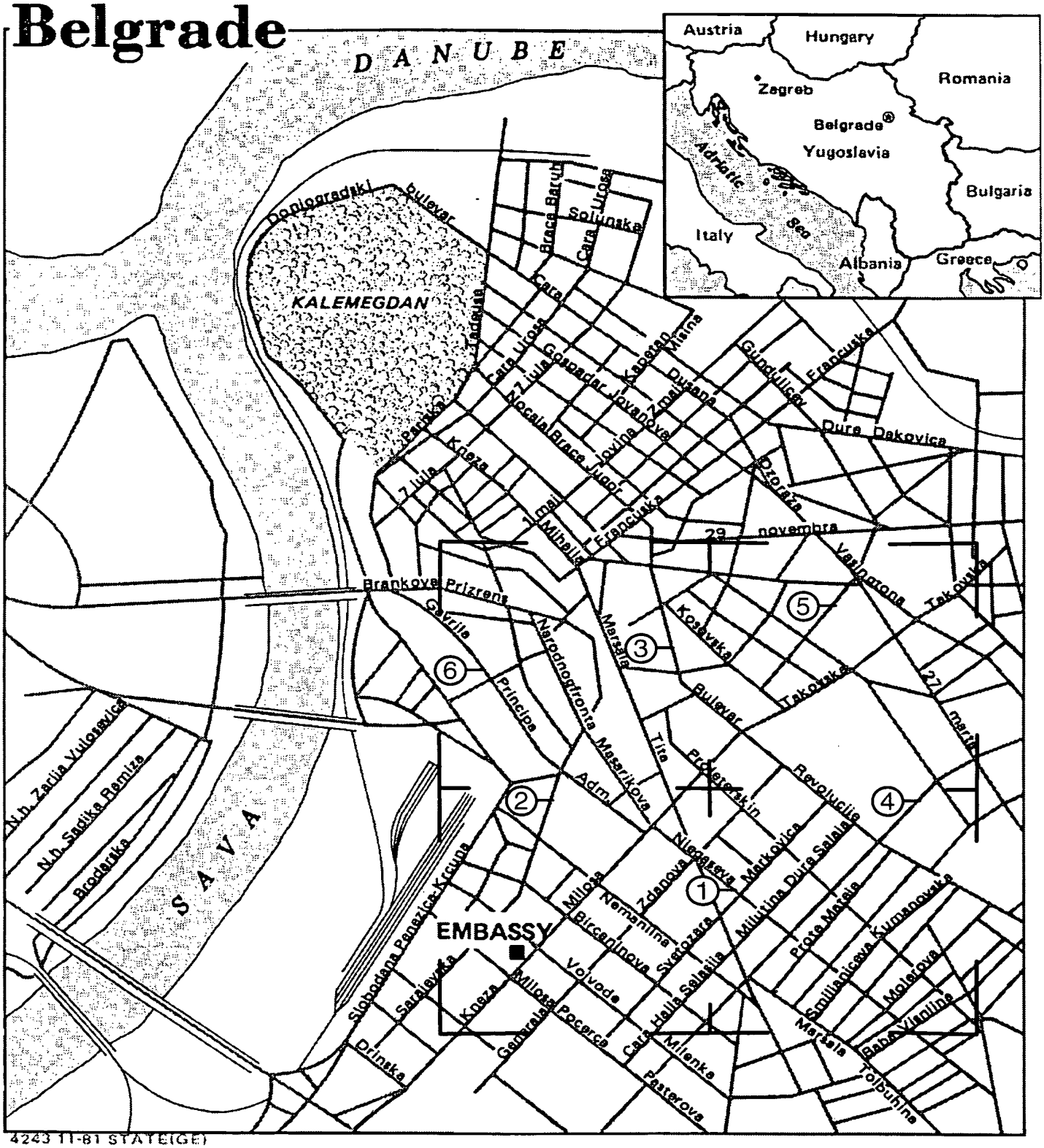


FIG.3

A typical query



4243 11-81 STATEIGE)

size	query
1 mile	HOSPITAL

FIG.4

Personal Information Locator (PIL)

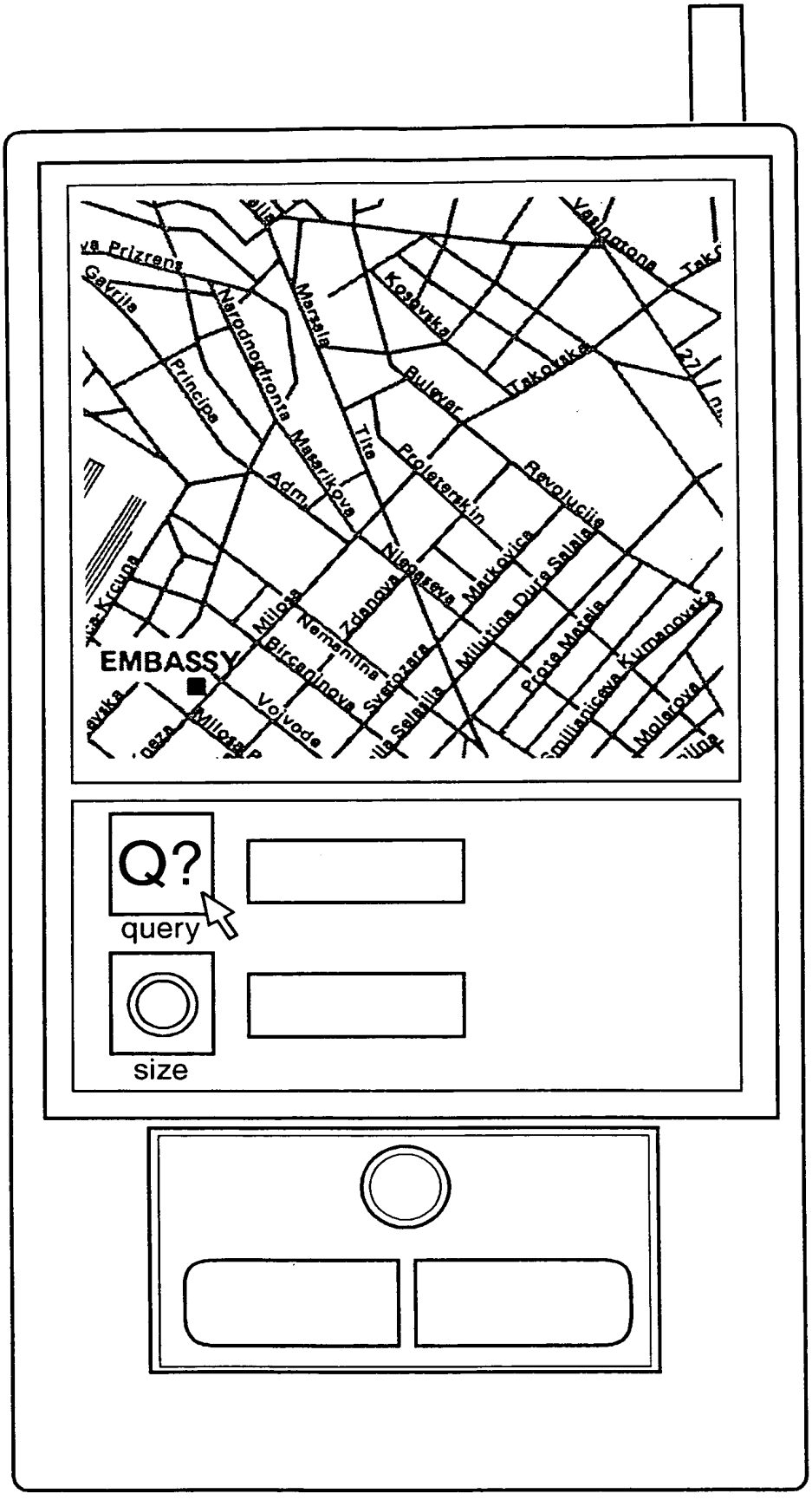


FIG.5

Iconic Map of the Query

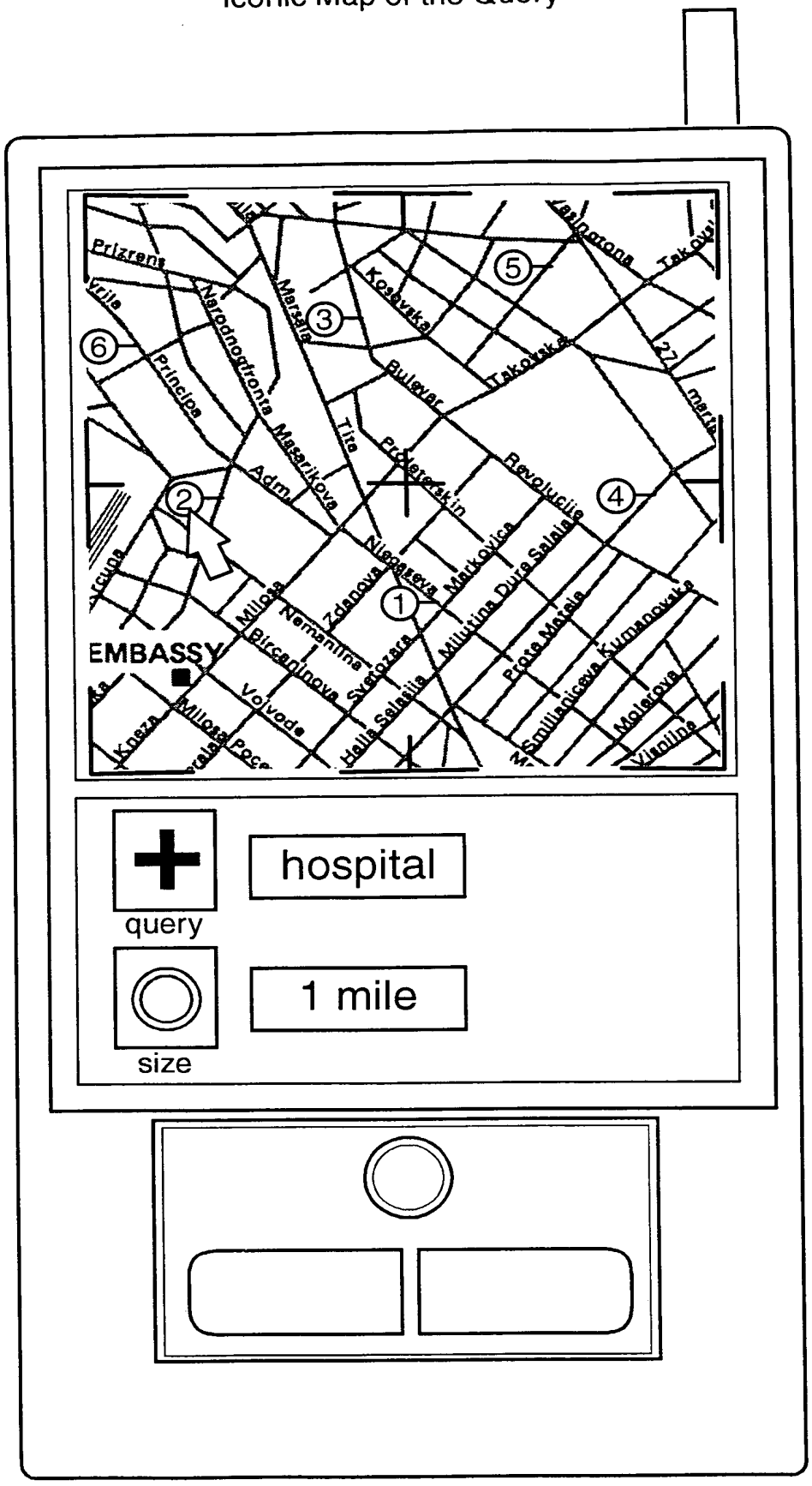


FIG.6

Information from Selected Hyperlink Icon

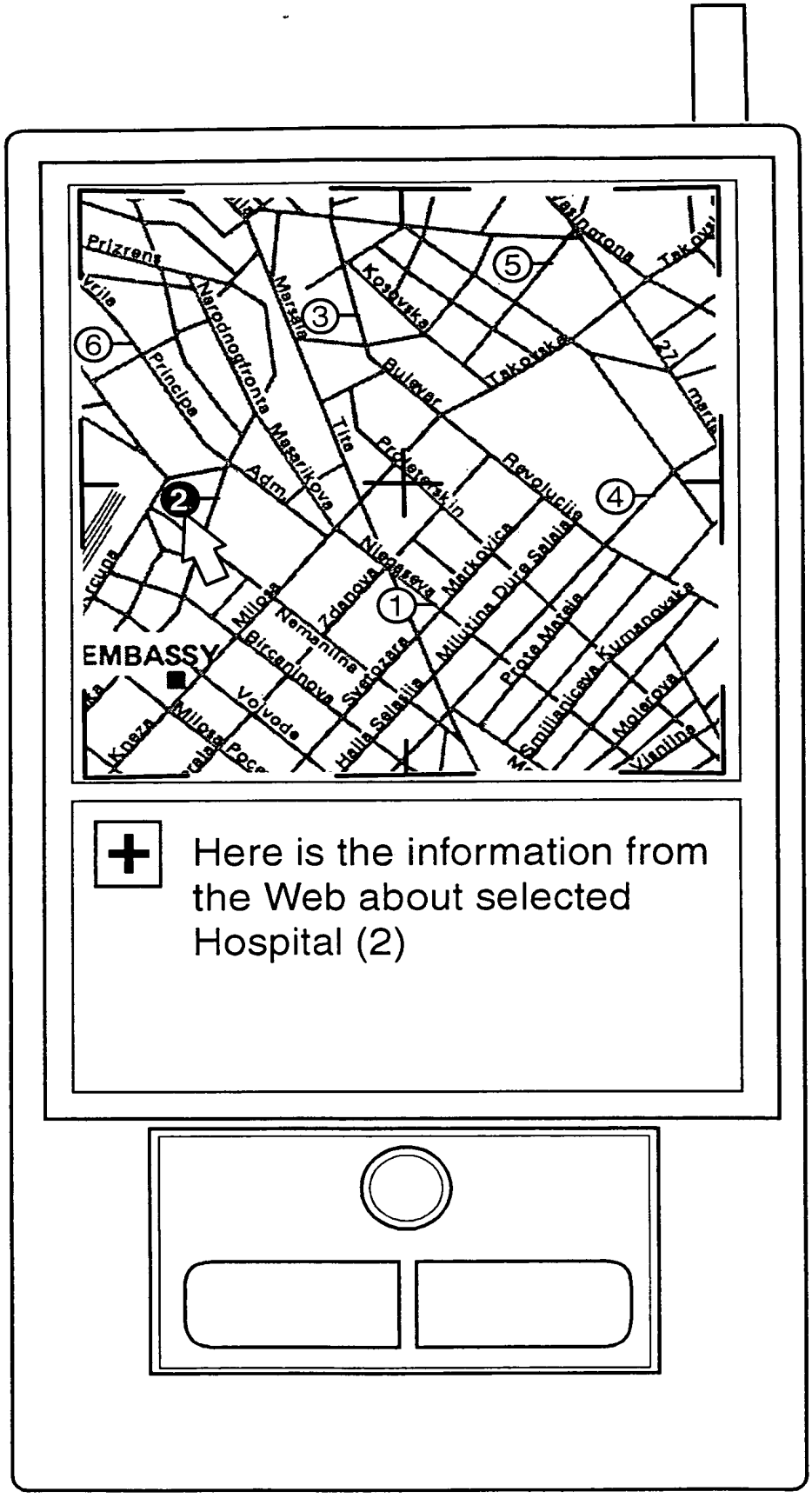


FIG.7